

SECTION 404 (b) (1) EVALUATION
PORT ORFORD MAINTENANCE DREDGING – SUMMER and WINTER
PORT ORFORD, CURRY COUNTY, OREGON

I. Introduction.

Section 404 of the Clean Water Act of 1977 requires that all civil works projects involving the discharge of dredged or fill material into the waters of the United States be evaluated for water quality effects prior to making the discharge. This evaluation assesses the effects of the discharge described below utilizing guidelines established by the Environmental Protection Agency under the authority of Section 404(b) (1) of the act.

This Section 404 (b) (1) evaluation updates the Section 404 (b) (1) evaluation dated October 24, 1997 by revising the Port Orford project description and the dimensions of disposal area within the near-shore placement area. The 1997 404 (b) (1) evaluation analyzed the near-shore placement area without specific site dimensions. Specific dimensions for dredged material placement were first identified in 2004. These dimensions are being enlarged to accommodate an unexpected increase in the quantity of sediment to be dredged from the project. The increase in anticipated disposal area will not affect any coastal use or resource differently than originally described.

II. Project Description.

a. Proposed Action. The federally authorized navigation project at Port Orford includes a breakwater that is 550-feet long and a turning basin that is 16-feet deep, 900-feet wide, and 750-feet long. Initially, only a summer maintenance dredging of the navigation channel was performed at Port Orford. The winter dredging of an area adjacent to the boat hoist began in 1988 as a result of summer dredging becoming insufficient to sustain the Port through the winter. Currently, the navigation channel is dredged each summer and the area around the boat hoist is dredged in the winter.

Dredging. A 750 feet long, 90 feet wide and 16 feet deep navigation channel is dredged between the turning basin and the dock over a 50-day period each summer. The typical work area is shown on the attached drawing. The channel is dredged to the authorized depth of 16 feet plus 4 feet of advanced maintenance for a total dredging depth of 20 feet. An additional 3 feet of sediment may be disturbed during dredging activities for a total depth of 23 feet. This practice provides access to boat hoists located at the existing dock and ensures that the authorized depth is maintained between dredging operations. For the summer dredging action, a clamshell dredge or pipeline dredge, operating between 1 May and 31 October, will accomplish the work.

In the winter, a 305 feet long by 30 feet wide area adjacent to the boat hoist is dredged. The authorized depth is 16 plus 4 feet of advanced maintenance for a total depth of 20 feet, but the actual dredging depth is typically less than -17 feet because of dredge equipment limitations. This is the minimum depth and area required to allow removal of boats and their catch (products) from the water to the safety of the dock. The winter contract is designed

around weather constraints to allow the minimum depth needed to use the dock facility. An estimated 500 to 7,000 cubic yards per year will be removed by pipeline dredging (submersible pump is lowered from the dock). Dredging will normally occur in 2-5 increments between 1 November and 15 April, and may extend into the summer depending on funding levels. The frequency of dredging will depend on how long adequate depths remain below the hoists. The typical work area is shown on the project map.

Disposal. Sediment from summer dredging will be placed in a near-shore placement area that is located approximately 200 feet off the edge of the breakwater (see project map). This area has been used for in-water disposal since the 1970s. Originally, the propeller-wash dredge *Sandwick* dredged the project and moved sediments offshore to the placement area. Since 2002, clamshell and pipeline dredges have been used. A Section 404(b) (1) evaluation was conducted, and a Section 401 water quality certification was issued, in 1997 based on analysis of this disposal site without specific site dimensions. The 2004 Unified Public Notice limited disposal site placement to an area of 400 feet by 400 feet. An area of these dimensions has a maximum capacity of 30,000 cubic yards of sediment. In 2003, approximately 25,000 cubic yards of sediment was removed during the summer dredging. Recent surveys indicate that approximately 45,000 cubic yards of sediment will need to be dredged in 2006. Modeling indicates that an area of approximately 800 feet by 800 feet will be needed for disposal at the near shore site to accommodate this quantity of dredged material. The placement area will remain 200 feet off the edge of the breakwater, and expand to the south and west, away from rocky intertidal habitat. This larger area of placement at the near shore site will also help with management of dredge material disposal during years with less sediment to remove.

Sediment from winter dredging will be discharged off the breakwater (“breakwater placement area”), as close to the outer end as possible, to avoid the natural rocky intertidal habitat at the shoreward end of the breakwater. Discharge will occur no less than 300 feet south of station “LEAD”, shown on project map. The discharge pipe will be located approximately 10 feet above the water surface and will discharge sediment below. The pipe will be moved as necessary to prevent mounding and to keep the discharge directed seaward.

b. Description of the Proposed Discharge Site. The vicinity of the near-shore placement area was inspected by Oregon Department of Fish and Wildlife, at the request of Port of Port Orford, and their report indicated a relatively flat sand bottom with few aquatic organisms observed. The 800 feet by 800 feet area encompasses substrate and aquatic organisms similar to that analyzed in the 1997 Section 404(b) (1) evaluation. Immediately adjacent to the breakwater, the aquatic habitat typically consists of undisturbed rocky shore/kelp habitat. Shoreline features include steep cliffs, two high-elevation rocks, several low-elevation rocks, small rocky intertidal areas, subtidal reefs, sand beach, the Port of Port Orford dock, and a protective ocean jetty. The material placed at the breakwater placement area will be discharged directly into the water, avoiding dispersal onto rocks and rocky surfaces.

III. Factual Determinations.

a. Physical Substrate Determinations. The latest sampling and analysis of sediments at Port Orford occurred on August 21, 2002. Three surface grab samples were collected from shoaled areas within the federally authorized project. All three samples were submitted for physical (Tier IIa) analysis including total volatile solids (TVS). Mean grain size for all of the samples was 5.43mm, with 46.89% gravel, 51.18% sand, and 1.19% fines, and 1.29% volatile solids. Discharge of dredged materials at the near-shore and breakwater placement areas will have no permanent effect on the characteristics of the substrate at the proposed disposal sites. Temporary changes in substrate elevation and bottom contours may occur after placement of dredged material at the near-shore placement area, but these changes are expected to be short-term because the site is an open-ocean, dispersive site.

b. Water Circulation, Fluctuation, and Salinity Determinations. Dredging and disposal operations would not affect water quality characteristics such as circulation, fluctuation, and salinity.

c. Suspended Particulate / Turbidity Determinations. Minor turbidity resulting from an increase in suspended solids may occur for a short period of time during dredging and disposal operations. This impact should be localized and of short duration because the majority of the dredged material is sand and gravel, which does not stay suspended in the water column for any length of time. All dredging and disposal of sediments is conducted so as to minimize siltation and turbidity in the project area. Turbidity is monitored per the requirements of the Oregon Department of Environmental Quality water quality certificate.

d. Contaminant Determinations. The three samples collected during the most recent sediment sampling event were submitted for chemical analysis that included metals, total organic carbon, pesticides and polychlorinated biphenyls (PCBs), phenols, phthalates, extractables, and polynuclear aromatic hydrocarbons (PAHs). None of the contaminants tested for were found to be at or above Dredged Material Evaluation Framework (DMEF) screening levels. All sediment was determined to be suitable for unconfined, in-water discharge without further characterization. Sediment testing at Port Orford shows that the sediments meet screening requirements and will not expose organisms to contaminants.

e. Aquatic Ecosystem and Organism Determinations. Benthic organisms and bottom dwelling invertebrates may be temporarily disturbed by dredging and disposal operations, but no lasting impact will occur to the overall population as a result of the proposed action.

Demersal species present at the inshore area of Port Orford are mostly residents (not migratory), and include a number of flatfish, sculpins, sea perch, and rocky reef fish that are associated with the neritic reefs and the breakwater. Dominant species include English sole, sanddab, and starry flounder. Essential fish habitat is present in the project

area for several species of groundfish. These species prefer hard bottom ocean subsurfaces and rocky intertidal habitat that is found off the breakwater at Port Orford.

A number of migratory fish species may also occur in the project areas. Species present include smelt, herring, anchovies, and a variety of other pelagic species. Coho and Chinook salmon adults and juveniles may occur infrequently in the area but are not expected to be found in the project area because there is no spawning or freshwater rearing upstream of Port Orford.

f. Proposed Disposal Site Determinations. The in-water discharge of dredged material would be in compliance with Environmental Protection Agency and State water quality standards. The material would not introduce toxics into the surrounding waters or violate the primary drinking water standard of the Safe Drinking Water Act (42 USC 300 et seq).

g. Determination of Cumulative Effects on the Aquatic Ecosystem. The proposed action is not expected to have a cumulative effect on the aquatic ecosystem.

h. Determination of Secondary Effects on the Aquatic Ecosystem. No significant negative secondary effects should result from the proposed action.

IV. Coordination.

The proposed action was coordinated with the appropriate Federal, State, and local agencies, organizations, and interested members of the public through Public Notice CENWP-PM-E-06-04, dated July 18, 2006. Comments were received from the Oregon Department of Fish and Wildlife (ODFW). ODFW indicated no objection to increasing the dimensions for discharge within the near-shore placement area. ODFW had concerns with disposal at the breakwater placement area and requested discontinuing use of the site and discharge of material in the expanded near-shore placement area. No other comments were received.

V. Findings of Compliance or Non-compliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made regarding this evaluation.

b. As stated in this evaluation, none of the alternative disposal methods and sites would have significant adverse effects on the aquatic ecosystem.

c. The proposed action is in compliance with applicable State water quality standards. State water quality certification was last issued in July 29, 2004.

d. The discharge of dredged material would not violate the toxic effluent standards of Section 307 of the Clean Water Act.

e. Use of the near shore site would not harm any species or habitats designated as critical, endangered, or threatened under the Endangered Species Act of 1973 (ESA).

f. The proposed discharge of dredged material would not result in significant adverse effects on human health and welfare; life stages of aquatic life or other wildlife dependent on the aquatic ecosystem; ecosystem diversity, productivity, or stability; or recreational, esthetic, and economic values.

g. Appropriate steps to minimize potential adverse impacts would be specified in the dredging contract.

h. With the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem, the proposed discharge is specified as complying with the requirements of Section 404(b) (1) guidelines.

Date: _____

ROBERT E. WILLIS
Chief, Environmental Resources Branch
Portland District, Corps of Engineers